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The Use of Student Financial Aid to Attract Prospective Teachers: A Survey of State Efforts

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by
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This report discusses state sponsored programs that seek to attract college students to teaching by paying off a portion of their student loans for each year they teach.

I. Introduction

The education reports that became "best sellers" in recent years generated intense pubicity, media attention, and political debate. Our shaky educational foundations, we were told, put the nation "at risk."

Policy makers responded quickly. The 98th Congress enacted a patchwork of education reform bills. Almost all of the 50 states legislated some form of education improvement, often as a result of the recommendations of ad hoc, high-level commissions and task forces.

A major theme that emerged from these activities was a concern about the ability to attract and retain a sufficient number of qualified teachers so necessary to the success of the newly enacted educational reform efforts. Indeed, Albert Shanker, President of the American Federation of Teachers, commented in a statement at a Congressional hearing that "the major struggle in education over the next period will be attracting and retaining teachers."

The difficulties of overcoming this problem are compounded by a unique combination of demographic forces and negative perceptions of teaching. Consider first the demographic dimensions of the problem. The supply of teachers and the demand for them are moving in sharply divergent directions. As we approach the 1990's, elementary school enrollments will significantly increase just as the college age population (the traditional source of teachers) declines. Furthermore, able women and minorities, once a major source of teachers, now have fewer barriers to overcome in entering other professions and, increasingly, are choosing to do so. There are already well-documented shortages of mathematics and science teachers. As we approach 1990, the imbalance between supply and demand will create the need for a projected one million new teachers.

Demography alone cannot account for the problems of teacher recruitment, however. The low salaries and prestige, and the difficult working conditions associated with teaching, deter many talented students from ever considering a career in the classroom. As more and more people are going to college, fewer and fewer of them are studying to be teachers. Higher education enrollments increased by nearly a third in the last decade at the same time that enrollments in teacher education programs decreased by over a third.

Accordingly, the task that confronts policy makers is enormous: how to staff greater numbers of classrooms, just as the odds of doing this successfully signifi-

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cantly diminish. The search for solutions has led policy makers to consider "all sorts of magnets to see which ones work," according to Keith Richburg's *Washington Post* report. For example, loans that can be repaid or "forgiven" by teaching are one such "magnet" that has been established in over half the states, proposed in many others, and originally authorized by Congress as Carl D. Perkins Scholarships. Another such magnet is a program of loan repayment for those already teaching. Still another form of financial assistance for teachers was incorporated in the Higher Education Amendments of 1986, recently passed by Congress; it permits currently employed teachers a 3-year deferment before they repay their Guaranteed Student Loans if they teach in an area of teacher shortage.

Is student aid an effective incentive to encourage teacher education studies and a classroom career? Is the loan forgiveness mechanism likely to operate as a magnet? Can loan repayment programs encourage teachers to remain in the classroom?

It is too soon after creation of these new programs to determine how effective they will be, but a preliminary examination of recently enacted state policies raises some questions in that regard. States are still at the "experimental stage or cutting edge of ignorance about what types and amounts of incentives" will attract teachers, notes Michael Kirst in a 1983 Stanford University policy report.

II. Methodology

This report is based on a survey of one type of incentive designed to attract talented individuals into teaching that has become increasingly popular among the states: student financial aid, primarily in the form of loan "forgiveness." The survey was conducted initially in late 1984 by mail inquiries to chief state school officers. A telephone follow-up with detailed questions was undertaken in January and February 1985. Collection of information from these sources was completed in the spring of 1985; the data were analyzed shortly thereafter.

III. Examination of Existing State Student Assistance Programs for Prospective Teachers

In general, student assistance programs can be grouped in three categories: grants or scholarships requiring no repayment, loans requiring repayment, and work opportunities. State student assistance to attract prospective teachers has focused on loans, rather than grants or work. However, the way the states have structured their loan programs tends to blur the distinction among grants, loans and work. The most commonly employed form of assistance utilized by the states is a loan that can be repaid by working in a school setting for a number of years. It should also be noted that traditionally states have kept tuition lower at the state colleges or regional state universities that train the vast majority of teachers. That has been a major subsidy then . . . and now.

Types of programs

A loan program with "forgiveness" provisions is the most frequently legislated incentive to attract students to teaching. In this model, undergraduates receive loans for their teacher education studies; the borrower cancels a portion of the loan by teaching for a specified length of time (e.g. one fifth of the loan for each of 5 years). Thus, teaching substitutes for the periodic cash repayment of the loan's principal and interest; the loan is "forgiven" and becomes, in effect, a grant.

Twenty-one states have this type of program. One state, Illinois, has a loan forgiveness program restricted to certified teachers seeking recertification in math and science. Iowa also provides forgivable loans for current teachers to advance themselves by becoming certified as math or science teachers.

An alternative incentive of lesser popularity among the states (and also of less cost to the states) is the loan repayment program in which the state repays a portion of an outstanding Guaranteed Student Loan (GSL) or National Direct Student Loan (NDSL) for a currently employed teacher. Repayment may be made directly to the lender, as it is in Pennsylvania, or the state may require teachers to make the repayment and then retroactively reimburse them. Iowa uses this latter method. The federal government has meanwhile subsidized the lower than market rate for the entire in-school and pay- back period.

Loan repayment programs, therefore, may provide more of an incentive to retain, rather than attract, teachers during the time the loan is being repaid. Three states have loan repayment plans; California is the largest. Another three states have programs with both loan forgiveness and loan repayment features. Table 1 identifies the type of program by state and by several of the other characteristics discussed here.

Table 1. Characteristics of Teacher Loan Programs by State, 1985

State	Program type	Year created	Maximum loan ($)	Eligibility		Teaching years required to forgive loan	Math/ Science Component
				Years	Criterion		
ALABAMA	LF	1982	3,996 [a]	2	Merit	6	yes
ALASKA	LF	1984	7,500 [a]	5	Merit	5	-
ARIZONA	LF	1983	4,000 [a]	2	Merit	4	yes
ARKANSAS	LF	1983	2,500 [a]	4	Merit	5	yes
CALIFORNIA	LR	1984	8,000 [b]	3	--	-	yes
CONNECTICUT	LF	1983	5,000 [a]	2	Merit	5	yes
DELAWARE	LF	1984	5,000 [a]	4	Merit	8	yes
FLORIDA	LF	1983	4,000 [a]	2	Merit	4	yes
	LR	1983	10,000 [b]	4	--	-	yes
GEORGIA	LF	1984	1,500 [a]	2	Merit	2	yes
ILLINOIS	LF	1983	550 [b]	NL	--	varies	yes
INDIANA	LR	1983	10,000 [b]	5	--	-	yes
IOWA	LF	1983	1,500 [b]	NL	--	2	yes
	LR	1983	6,000 [b]	6	--	-	yes
KENTUCKY	LF	1982	2,500 [a]	3	Need	3	yes
LOUISIANA	LF	1984	2,000 [a]	4	Merit	5	-
MAINE	LF	1984	1,500 [a]	4	Merit	2	-
MARYLAND	LF	1984	5,000 [a]	4[c]	Merit	3	yes
MASSACHUSETTS	LF	1984	2,000 [a]	2	Need	2	yes
MISSISSIPPI	LF	1983	3,000 [a]	2	Merit	2	yes
NEBRASKA	LF	1983	500 [c]	6[c]	Merit	3	yes
NEW YORK	LF	1984	3,000 [a]	4	Merit	2	yes
NORTH CAROLINA	LF	1957	2,000 [a]	4	Merit	4	-
PENNSYLVANIA	LF	1983	1,500 [a]	4	Merit	4	yes
	LR	1983	2,500 [a]	4	--	-	yes
SOUTH CAROLINA	LF	1984	2,500 [a]	5	Merit	5	yes
TENNESSEE	LF	1984	1,500 [a]	4	Merit	4	yes
TEXAS	LF	1984	1,000 [c]	4[c]	Merit	2	yes
	LF	1984	2,500 [a] ($5,000 max)	none	Need	4	yes
VERMONT	LR	1984	varies [a]	none	--	-	yes
VIRGINIA	LF	1984	2,000 [a]	2	Merit	2	yes
WASHINGTON	LF	1983	2,500 [a] ($10,000 max)	none	Need	10	-

Note. LF = Loan Forgiveness; LR = Loan Repayment. NL = No Limit.

[a]per year [b]cumulative [c]per semester

Growth of Programs

One state loan forgiveness program predates the passage of the National Defense Education Act (NDEA) — the 1957 North Carolina plan. Interest in this mechanism derived new momentum, however, from the education reform movement of the 1980's. Two southern states enacted loan forgiveness legislation in 1982. The rapidity with which incentive programs were passed during the 1983 and 1984 legislative sessions in 25 states suggests a "bandwagon" effect.

The urge to pass such legislation is not over. The present survey formally includes legislation enacted as of January 1985, but the Information Clearinghouse of the Education Commission of the States has identified subsequent actions in Missouri, New Jersey, Ohio, and Wyoming, to name just a few states. State boards or task forces in at least a dozen other states have made similar recommendations.

Size of Programs

The amount of funds appropriated annually for these programs varies considerably — from $10,000 in Vermont to $2.2 million in Texas. At least six states — Alabama, California, Florida, New York, South Carolina, and Texas — have program appropriations in excess of $1 million. At the other end of the spectrum, eight states — Alaska, Arizona, Arkansas, Illinois, Indiana, Maryland, Nebraska, and Vermont — have programs in the $100,000 to $500,000 range. One state, Louisiana, has not yet appropriated funds for its program. It is important to note that the dollar requirements for annual appropriations depend on whether a state lends its own money or uses the Guaranteed Student Loan Program and pays only for those who enter and remain in teaching.

Amount and Duration of Aid

In the loan forgiveness programs, the amount of aid varies from $7,500 a year for up to 5 years in Alaska, to $1,500 a year for 2 years of study in Georgia. Approximately half of the states provide aid for 2 years and half for 4 years or more, even though many students do not declare an education major until the end of the sophomore year. States with 2-year programs typically offer more substantial awards — often in the $3,000 to $4,000 a year range — for that time period. Two states in which large percentages of students attend independent colleges — Massachusetts and Connecticut — offer higher amounts for attendance at a private institution.

Loan repayment plans typically specify a total amount that the state will repay over a given period of teaching. Three states — Florida, Pennsylvania, and Indiana — will repay up to $10,000 in outstanding loans, with the other states repaying lesser amounts. Florida, Pennsylvania, and Vermont will repay the outstanding loans for a 4-year period of teaching, Indiana for 5, Iowa for 6, and California for 3.

Eligibility

The eligibility requirements in loan forgiveness programs are notable in two respects. First, the concept of financial need, long the cornerstone of student assistance, is often absent in these programs, as the eligibility criterion column of Table 1 indicates. Only the Massachusetts and Washington programs are need-based; Pennsylvania and Iowa use GSL, which is need-related. In Kentucky, need is considered, but is of only minor importance in determining eligibility. The North Carolina program was need-based prior to 1984, but it is now strictly merit-based. Texas has two loan programs, one based on need and one using merit criteria. Financial need is not a factor in any of the other states.

Second, the eligibility requirements for loan forgiveness programs are usually geared to recruit top academic students into teaching. Thus, states have combined academic standards with monetary incentives as a means of improving the quality of the teaching force. American College Testing Program (ACT) or Scholastic Aptitude Test (SAT) scores, grade point average (GPA; ranging from 2.5 in several states to 3.2), and rank in high school graduating class (at least top half in all states and upper 15 percent in Texas) are common eligibility requirements. Admission to a teacher education program, recommendations, citizenship, and state residency are also criteria.

Loan repayment plans do not establish as clearly as do loan forgiveness programs the linkage between academic standards and monetary incentives to teach. However, in Pennsylvania, the program is restricted to college graduates, beginning with the class of 1984, who maintained at least a 3.0 GPA in their major subject area; to be eligible they must be teaching math or science full time and have an outstanding balance from a loan approved by the Pennsylvania Higher Education Assistance Agency. In other cases, eligibility criteria are limited to factors such as the possession of a current teaching license, a teaching position and an outstanding student loan balance. In California, for example, applications for the loan repayment program are distributed to districts with specific teacher shortages. The districts then determine which of their teachers may apply. To be eligible, applicants must have valid teaching credentials; be actually teaching math, science, or another defined shortage area; agree to continue such service in that subject for 3 consecutive years; and have an outstanding balance in a GSL, NDSL, or other student loan approved by the Student Aid Commission.

Rate of Forgiveness or Repayment

The rate at which the loan is forgiven or repaid may be an important factor in encouraging recipients to remain in the classroom until their debt obligation is eliminated. There is considerable variation among the states in setting these terms.

In the loan forgiveness programs surveyed, recipients are permitted to cancel a portion of the loan through teaching as an alternative to the periodic cash repayment of principal and interest. A loan may be forgiven on a one-to-one basis — for example, a year of loan forgiveness may be granted for a year of teaching. On the other hand, a year of assistance may require 2, or even 3 years of teaching. This latter alternative may encourage loan recipients to remain in teaching for a longer period so that their complete obligation is repaid through service rather than through cash.

Ten states — Georgia, Indiana, Massachusetts, Mississippi, North Carolina, Pennsylvania, Tennessee, Texas, Virginia, and Kentucky — require that a student teach a year for each year of assistance. New York has a more generous forgiveness schedule — a recipient must teach for only 1 year for each 2 years of the award. As Table 1 indicates, a New York recipient could receive a $12,000 loan for 4 years of undergraduate teacher education study and have this total amount forgiven by teaching just 2 years. Maryland requires 1 1/2 years of service for each year of aid. Arizona, Delaware, and Florida require 2 years of teaching to forgive 1 year of the loan, whereas Alabama requires 3 years for each year of assistance.

Other states specify that a certain percentage of the loan will be forgiven for each year of classroom service. The most common pattern in this instance is to have 20 percent of the loan cancelled for each year of teaching. Arkansas, Connecticut, Louisiana, and South Carolina utilize this schedule.

How long it will take for a student to have the loan completely forgiven by teaching depends not only on the rate of forgiveness but also on the amount and duration of the award. Table 1 shows that the majority of the states with programs

require 5 years or less of teaching to complete forgiveness of the loan through service, and in fact the loan conditions in eight states, specify only 2 years of teaching. At the other extreme, Alabama recipients are obliged to teach 6 years to have their $8,000, 2-year loan completely forgiven; Delaware teachers must work 8 years to forgive a $20,000, 4-year loan; and Washington teachers work 10 years to cancel a maximum of $10,000 in loan assistance.

As previously discussed, loan repayment programs are usually structured so that a total loan amount is repaid in a given time period. Within this scheme, however, there are options. A loan can be repaid in equal amounts. For example, Iowa repays up to $1,000 for each year of teaching up to a $6,000 maximum. Or loans can be repaid in unequal yearly amounts. California repays $8,000 over 3 years, with $2,000 in year 1 and $3,000 annually in years 2 and 3. This latter option could act as an incentive to keep teachers in the classroom longer. In no state would repayment last more than the specified 6 years in Iowa.

Buy-Out Provisions

All the loan forgiveness programs surveyed establish the terms under which a recipient can "buy out" the loan through cash repayments as an option to teaching.

Loan repayment plans do not provide for a buy-out, since the recipients must be actually teaching to receive program benefits. If teaching service ceases, so does loan repayment. The recipient then assumes full responsibility for the remaining loan balance with no additional penalty.

The buy-out provisions in the loan forgiveness programs can be ranked on a continuum from most lenient (i.e., the least penalty) to most stringent. On this continuum, the interest rate of the teacher loan program as compared with the rate charged in more general loan programs (for example, GSL), is one of the factors that can influence the choice the potential borrowers make about participation in the program. If the rate is lower than that of the GSL, for example, a student may seek the loan even though he or she has no plans to teach. Conversely, if the interest rate is higher than that of the GSL, the incentive to participate may be lower, but the pressure to enter teaching and have the loan forgiven through service will be higher.

Programs in eight states — Georgia, Iowa, Massachusetts, Mississippi, Nebraska, South Carolina, Tennessee, and Washington — specify the same interest rate currently used in the GSL. The South Carolina and Washington programs also parallel GSL in terms of the length of the repayment period — 10 years. In the other states even though the interest rate is identical, the repayment time is considerably shorter — for example, 4 years in Massachusetts and Tennessee and 3 years in Mississippi and Nebraska.

Three states have rates below the current GSL rate. In Alaska, the loan must be repaid at 5 percent within 10 years. North Carolina specifies 6 percent interest with the repayment period open-ended. Maine charges no interest during the 5-year repayment period. Illinois requires reimbursement of the actual tuition to the state, with no interest charged.

The remaining states require interest rates higher than the 8 percent GSL rate. Rates range from 10 percent in Arkansas and New York to 15 percent in Maryland. The most prevalent rate is 12 percent in Alabama, Arizona, Delaware, Texas, and Virginia.

Other factors to evaluate in considering buy-out are amount of time allowance for repayment; grace period; date from which interest is charged (i.e., whether interest is calculated from the first loan disbursement or from the date studies were completed); and the legal obligation incurred by the student. Most states require that the student sign a letter of agreement, written contract, or promissory note at the time of the initial award specifying the terms to be fulfilled.

A state can employ other strategies to make it difficult for a loan recipient to exercise the buy-out. For example, a recipient of a Kentucky teacher loan who decides not to teach is immediately liable for half of the loan amount plus interest as set by the Kentucky Higher Education Assistance Authority.

Some states provide generous loan amounts for longer periods of time and make it relatively easy for the recipient to repay in cash rather than by service. South Carolina imposes an 8 percent interest rate with 10 years to repay the maximum loan limit of $12,500. This is identical to the GSL terms offered everyone for that maximum amount.

This particular pattern raises questions about how effective the program will be as an incentive for students to become teachers. If the penalties to repay in cash rather than teach are so minimal that they cause little hardship for the individual, the program may be less likely to accomplish its goal — to increase the numbers of students choosing to teach.

Other states provide less assistance and make it more difficult to pay back in cash rather than by teaching. An example is the Mississippi program, which provides a maximum of $6,000. If recipients do not teach they are required to pay half of the outstanding balance over 3 years to "liquidate damages" resulting from that decision. In this instance, the amount of funds and the perceived penalty might actually deter applicants and undermine the goal of such legislation. Finding the correct balance between the "carrot" and the "stick" is thus essential.

Type of Teaching Qualifying for Forgiveness and Repayment

State loan forgiveness and repayment programs to attract teachers are focused on specific personnel needs. The last column of Table 1 illustrates that math and science teachers are the intended recipients in nearly all of the states. Alaska specifies that the funds are to go to those preparing to teach in rural schools. Some states evaluate staffing needs yearly in cooperation, most often, with the State Board of Education. As a result, states have identified bilingual—bicultural education (California);* speech and hearing (Connecticut); special education (Georgia, Indiana); and foreign language teaching as critical shortage areas, along with math and science.

Of the states, 15 require that teachers qualifying for forgiveness or repayment work in a secondary school. Another 11 states permit teaching in either an elementary or a secondary school as a prerequisite for assistance.

Although the majority of the states require the loan recipient to fulfill the teaching obligation in a public school, at least 12 states permit service in private schools as qualification for forgiveness or repayment.

Administration

Nine states administer their programs through the state scholarship or loan agency. The administering agent is the State Department of Higher Education in six states and the State Department of Education in eight states. Variations on these administrative themes exist in the remaining states.

IV. Will They Work?

The limited time in which most of the state programs have been operating precludes thorough and conclusive analysis of their effectiveness. Complete evaluation in most states must be reserved for several years hence, when there is more information on the numbers of participants in each program, their retention in the classroom, or their decision to utilize the cash repayment option. Data collection of this nature is just getting under way in the states.

*California also offers scholarship grants for bilingual—bicultural education.

However, experiences with earlier loan forgiveness programs — most notably the 1958 National Defense Education Act (NDEA) and the 1963 Health Professions Student Loan Program (HPSLP) — are suggestive of what we might expect from the new wave of loan incentive programs. In addition, some limited evidence is available from several of the state programs.

A look at the Past

The landmark National Defense Education Act authorized low-interest loans to college students. Borrowers could have up to half of this loan cancelled — or forgiven — by teaching in elementary or secondary schools. It is interesting to note that the original inclusion of loan forgiveness in NDEA was the accident of Congressional compromise rather than representing the passage of a tested policy instrument. "It is almost impossible to apply logic to loan forgiveness," according to Jack Morse, a witness of the event. "Its authors could scarcely have believed that the forgiveness of a few hundred dollars in loans, spread over a five year period, would draw many into teaching who would otherwise have entered more lucrative professions. It can be explained only by suggesting that it was as close to a grants program as the House would buy (in 1958), and it would be defended by pointing to the shortage of teachers."

Little positive effect has been attributed subsequently to the loan forgiveness provisions of NDEA in increasing the number of teachers. Almost 200,000 teachers applied for loan forgiveness, but many later reported they had planned to enter teaching even without the loan money. A 1968 College Board study for the U. S. Office of Education concluded that there was no "clear cut evidence that the teacher cancellation provision has materially contributed to an increase in either the number or quality of teachers." Jim Stedman's 1983 Congressional Research Service study concluded that "many borrowers reap, in essence, a forgiveness windfall doing what they would have done anyway . . ."

Increasing the number of doctors and dentists practicing in underserved shortage areas was the motivation for the loan forgiveness provisions in the Health Professions Student Loan Program (HPSLP), passed in 1963. Modeled after the NDEA provisions, the program provided low-interest long-term loans to medical, dental, and other health professionals. Upon completion of their degrees, those working in a designated manpower shortage area were eligible to have portions of their outstanding loans forgiven.

The forgiveness provisions in HPSLP have also been evaluated with similar critical results. Two studies by the General Accounting Office, one in 1974 and the other in 1978, concluded that the forgiveness provisions were largely ineffective in increasing the number of doctors and dentists in underserved shortage areas. As with the NDEA program, relatively few anticipated positive outcomes have resulted from HPSLP loan forgiveness provisions.

Current State Experiences

The experience of two states allow some tentative conclusions and observations.

The North Carolina program has aided almost 12,000 students since its inception in 1957. Of this number, slightly fewer than half met certification requirements and repaid their loans by teaching. Twenty-eight percent of the total recipients repaid their loans by cash, and approximately 10 percent met their obligation by a combination of teaching service and cash repayment. The remainder are still in school or are in the early stages of teaching. Therefore, the program has been between 50 and 60 percent efficient in identifying people willing to teach for several years. There is relatively little information, however, on the program's affect in attracting teachers

to specific geographical regions or relating to qualitative evaluation of the recipients.

In Kentucky, after 3 years' operation, 140 recipients have graduated (as of May 31, 1985). Of those, 73 percent have found teaching positions. Twenty percent are paying their loan back by cash, with the remainng numbers on deferred status. Whether the 73 percent who are currently in the classroom will remain there for the full 3 years necessary to cancel their loan obligation is an open question. It should be noted that the stringent buy-out provisions (half the funds to be returned immediately) might discourage them from leaving teaching.

The Kentucky situation is also interesting from another standpoint. There are documented reports that the first graduates of the loan program discovered few jobs available to qualify for forgiveness. One explanation is that existing teaching positions were being filled by tenured teachers in other subject areas, who were reassigned to math and science classrooms. This situation is not unique to Kentucky. Thomas Toch has reported in *Education Week* that loan recipients in other states who were applying for jobs sometimes found no vacancies because teachers with seniority were employed out of their areas of certification.

Several additional observations can be made about the existing programs, especially those with forgiveness. In interviews with program administrators, many indicated that the loan forgiveness programs were not as successful as had been anticipated and expressed skepticism about their viability. A commonly voiced viewpoint was "the program is probably just financing those who would go into teaching anyway." It is also notable that of the states surveyed, over half reported the available loan funds were not, or were not anticipated to be, completely utilized because of insufficient numbers of applicants. It is difficult, however, to assess how much of this phenomenon can be attributed to the newness of the programs, rather than to a lack of interest in their provisions.

Loan forgiveness or repayment programs by themselves probably will not solve the problem of recruiting and retaining qualified teachers. The reason students are not going into teaching is more complex than just the ability to pay for college. In a press release from the Carnegie Forum on Education, Lewis M. Branscomb, chief scientist of International Business Machines Corporation and chairman of the Carnegie Task Force on Teaching as a Profession, notes that "drawing people to teaching who might otherwise become doctors, lawyers, business managers, or computer scientists will require turning teaching into a profession that offers rewards comparable to those in other professions."

It is not within the scope of this paper to offer recommendations about how teaching can become a more attractive professional option. That the low salaries and low status of teachers deter academically talented college students from the classroom is well documented. Higher salaries, improved working conditions, more rigorous entry requirements, and better opportunities for advancement or professional fulfillment must be addressed. The ability to attract and retain the best and the brightest teachers in adequate numbers will depend primarily on making teaching a more desirable career and only secondarily on incentives such as financial assistance.

V. Conclusion

This paper has surveyed state sponsored financial aid programs designed to draw talented individuals into the teaching force. It has raised some concerns about how effective these programs will be as incentives for students. With programs operative in half of the states, and new ones planned in a number of others, this is an opportune time for policy makers to consider several issues related to the effectiveness of student assistance programs in meeting stated public policy goals.

First, loan forgiveness and repayment programs should be examined not in isolation but against the broader backdrop of other policies aimed at attracting and retaining teachers. The recent number and scope of state legislative actions to improve the teaching profession have been impressive and include approaches such as master teachers, career ladders, higher teacher salaries, peer performance evaluations, and merit pay. Public officials will want to ask how effective loan programs are as incentives when contrasted with other mechanisms. Given the limited financial resources available to implement teacher reform measures, it is imperative to discover which policies, alone or in combination, have the most potential for ameliorating the problems of teacher supply or stimulating quality.

This leads to a second consideration. Full-scale assessment of these programs should be initiated in the states. Key factors in evaluating the programs' effectiveness will vary according to each state's particular goals. However, common measures might include (1) relationship between number of applicants and awards made, (2) utilization of total funds appropriated, (3) number of recipients opting to use the loan's buy-out provisions, (4) ability to retain teachers after they fulfill their teaching obligation, and (5) availability of the types of teaching jobs to qualify for forgiveness or repayment.

Recent appropriations of state-funded loan programs can only be sustained if there is a favorable perception of these measures, as Michael Kirst's 1985 paper points out. State policy makers must be able to demonstrate that the higher price tag associated with the recently enacted reforms is justified by the results they are producing. Unless states can document positive changes within the next few years, it is possible that the monetary gain of the immediate past will be lost. Assessment, then, must become an integral part of the loan program.

As an alternative to raising their own start-up funds for loan programs from state tax dollars, states should consider the possibility of relying on bank capital and federal subsidies under GSL. State expenditures then would be postponed until the teachers actually enter the classroom and all of the funds would be targeted on those who remain in teaching for the specified time. This approach also relies on existing administrative personnel and procedures in each state and on lenders who will collect automatically from those who do not teach.

Policy makers should also consider the issue of equity and the need for diversity in the backgrounds of students who choose teaching as a career. Given the projected increases in minority elementary and secondary school enrollments over the next decade, a broader range of incentives and programs may be necessary to attract teachers who will be role models for this emerging population. Specially targeted aid for promising minority teachers should be considered.

Within the range of alternatives, policy makers should consider whether grants or scholarships might be more effective than forgivable loans. Gordon Ambach, New York State Commissioner of Education, has proposed a $10,000 scholarship for liberal arts college graduates willing to study for a master's degree and enter teaching in New York State. (In 1985, the state legislature approved a $4,000 stipend along these lines.) Frank Newman has proposed Public Service Teaching Fellowships that would provide a grant of $3,000 per year of each student selected. Newman notes that an advantage of his approach is that "participating students are likely to be attracted from diverse backgrounds." Whether these types of grants or fellowships are more potent incentives than forgivable loans in attracting minorities to teaching deserves additional debate and experimentation.

A final issue to be considered is where prospective teachers choose to be employed. Even if the programs are effective in attracting academically qualified teachers, such individuals may not be evenly distributed throughout the state's

schools. Upon graduation, a loan recipient can seek a teaching position anywhere within the state and in any discipline or school that qualifies for forgiveness or repayment. Given this latitude, it is possible that teaching positions in less desirable schools, whether they be in the inner city or in more isolated and rural districts, may be unfilled because the assistance provided is not enough of an incentive to overcome the disadvantage of teaching in these areas.

Programs designed to attract talented individuals into teaching must be assessed in the larger context of available policy options aimed at increasing the numbers and quality of teachers. The ability to attract and retain the best and the brightest teachers in adequate numbers will depend primarily on making teaching a more desirable career and only secondarily on incentives such as student financial assistance.

References

Action in the States. Task Force on Education for Economic Growth, Education Commission of the States. Denver: Golden Bull Press, July 1984.

Akin, James N. "Teacher Supply/Demand 1985, A Report Based Upon an Opinion Survey of Teacher Placement Officers." Madison, WI: Association for School, College, and University Staffing, 25 January 1985.

American Association of Colleges for Teacher Education. *Teacher Education Policy in the States: 50 State Survey of Legislative and Administrative Actions.* Washington, D.C.: American Association of Colleges for Teacher Education, February 1985.

"An American Federation of Teachers Interim Report on Math and Science Education and the Math and Science Teacher Shortage." Washington, D.C.: American Federation of Teachers, 1983.

Ashburn, Elizabeth A. "Emergency Teacher Certification." *ERIC Digest.* Washington, D.C.: Educational Resources Information Center Clearinghouse on Teacher Education, February 1984.

Betsch, Karen. "Quality of Teachers: Standards and Incentives." *ECS Issuegram,* No. 45, April 1984.

Borkow, Nancy B., and K. Forbis Jordan. *The Teacher Workforce: Analysis of Issues and Options for Federal Action.* Washington, D.C.: Congressional Research Service, 7 November 1983.

College Entrance Examination Board. *Study of Federal Student Loan Programs.* Washington, D.C.: U.S. Office of Education, 1968.

Congressional Research Service. "Comparison of Recommendations From Selected Educational Reform Reports." Washington, D.C.: 23 September 1983.

Conway, Mary M. *Math and Science: Where are the Teachers*? Washington, D.C.: Council for Basic Education, September 1983.

Cresap, McCormick and Paget. *Teacher Incentives: A Tool for Effective Management.* Reston, VA: National Association of Elementary School Principals, 1984.

Currence, Cindy. "New Panel's Goal: To Make Teaching 'True Profession'." *Education Week,* 29 May 1985, pp. 60-61.

Darling- Hammond, Linda. *Beyond the Commission Reports: The Coming Crisis in Teaching.* Santa Monica: The Rand Corporation, July 1984.

Feistritzer, C. Emily. *The Making of a Teacher: A Report on Teacher Education and Certification.* Washington, D.C.: National Center for Education Information, 1984.

Fiske, Edward B. "Teacher Glut Is Coming to an End; Take Notes." *The New York Times,* 24 June 1984, p. E24.

Gallup, Alec. "The Gallup Poll of Teachers' Attitudes Toward the Public Schools, Part 2." *Phi Delta Kappan,* January 1985, pp. 323-330.

Goertz, Margaret E., Ruth B. Ekstrom, and Richard J. Coley. "The Impact of State Policy on Entrance into the Teaching Profession." Princeton: NIE Grant No. G83-0073, October 1984.

Guthrie, James W., and Ami Zusman. "Teacher Supply and Demand in Math and Science." *Phi Delta Kappan,* September 1982, p. 28-33.

Harrison, William A. *Attracting and Retaining Qualified Teachers.* Washington, D.C.: The National Conference of State Legislatures, July 1984.

Hodgkinson, Harold L. *All One System: Demographics of Education, Kindergarten Through Graduate School.* Washington, D.C.: Institute for Educational Leadership, 1985.

Johnston, Karen L., and Bill G. Aldridge. "The Crisis in Science Education: What Is It? How Can We Respond?" *Journal of College Science Teaching,* September/October 1984, pp. 22-28.

Jordan, K. Forbis. *Teachers for Precollege Math and Science Programs.* Washington, D.C.; Congressional Research Service, 28 July 1982.

Jung, Steven M. *Guidelines for Evaluating Teacher Incentive Systems.* Washington, D.C.: Education Commission of the States, November 1984.

Kirst, Michael W. "State Education Policy in An Era of Transition." Policy Paper No. 83-C7. Stanford: Institute for Research on Educational Finance and Governance, Stanford University, December 1983.

Kirst, Michael W. "Sustaining State Education Reform Momentum: The Linkage Between Assessment and Financial Support." Paper presented at Education Commission of the States meeting, July 1985.
Kleiman, Dena. "Schools Find Math Jobs Hard to Fill." *The New York Times,* 22 April 1982, p. B13.
Mangeria, John, and Richard Kemper. *Factors Related to High School Students' Interest in Teaching as a Profession.* Fort Worth: Texas Christian University, January 1984.
McGuire, C. Kent, and John A. Thompson. *Costs of Performance Pay Systems.* Washington, D.C.: Education Commission of the States, October 1984.
Morse, John F. "How We Got Here from There," in Lois S. Rice ed., *Student Loans: Problems and Policy Alternatives.* New York: College Entrance Examination Board, 1977.
National Academy of Sciences. *Science and Mathematics in the Schools: Report of a Convocation.* Washington, D.C.: 1982.
National Commission for Excellence in Teacher Education. *A Call for Change in Teacher Education.* Washington, D.C.: American Association of Colleges for Teacher Education, February 1985.
National Council of Teachers of Mathematics. "The Teacher Shortage — An NCTM Fact Sheet." Reston. VA: 1982.
National School Public Relations Association. "Crisis in Quality." *Education U.S.A.,* Vol. 27, No. 19 (7 January 1985):137.
Newman, Frank. *Higher Education and the American Resurgence.* Princeton: The Carnegie Foundation for the Advancement of Teaching, 1985.
Olson, Lynn. "Science Teachers' Group Readies Plan to Offer Own Certification." *Education Week,* 20 February 1985, p. 1.
Palaich, Robert. "State Policies to Screen and Attract Teachers." *ECS Issuegram,* No. 23, 1 March 1983.
Palaich, Robert, and Donald Burnes. "Teacher Shortages in the Next Decade." *ECS Issuegram,* No. 24, 1 March 1983.
Palaich, Robert, and Ellen Flanelly. *Improving Teacher Quality Through Incentives.* Washington, D.C.: Education Commission of the States, October 1984.
Palmer, Stacy E. "State Programs for Teachers Called Ineffective." *Chronicle of Higher Education,* 5 August 1985, p. 17.
Passow, A. Harry. "Tackling the Reform Reports of the 1980's. *Phi Delta Kappan,* June 1984, pp. 674-683.
Pipho, Chris. "Tracking the Reforms (Part IV): Loan Forgiveness Programs: Will They Work? *Forum.* Washington, D.C.: Education Commission of the States, April 1985.
Richburg, Keith B. "Critical Shortage of Teachers Looms for Nation." *Washington Post,* 29 April 1985, p. Al.
Rodman, Blake. Forgivable Loans: Their Success is Mixed, Future is Unsure." *Education Week,* 4 September 1985, p. 1.
Rosenholtz, Susan J. *Political Myths About Reforming Teaching.* Washington, D.C.: Education Commission of the States, October 1984.
Rotberg, Iris C. "A New Perspective on Math and Science Education." *Phi Delta Kappan,* June 1984, pp. 668-675.
Schwartz, Henrietta. "Recruitment, Selection, Retention and Graduation of Teacher Education Candidates." Washington, D.C.: National Commission on Excellence in Teacher Education, 22 October 1984.
Stanfield, Rochelle L. "New or Old Federalism? Reagan Pitch for Science Math Aid Annoys States." *National Journal,* 7 May 1983, pp. 961-964.
Stedman, Jim. *The Experience with Loan Forgiveness and Service Payback in Federal and State Student Aid Programs.* Washington, D.C.: Congressional Research Service, 27 January 1983.
Toby, Jackson, "Pay Isn't Foremost of Teacher Tribulations." *Wall Street Journal,* 12 February 1985, p. 30.
Toch, Thomas. "How to Attract Better Teachers." *Journal of Contemporary Studies,* Summer 1984, pp. 59-67.
Toch, Thomas. "Teacher- Shortage Realities Seen Thwarting Reform" *Education Week,* 5 December 1984. p. 1.
United States Department of Education. *The Nation Responds: Recent Efforts to Improve Education.* Washington, D.C.: U.S. Government Printing Office, May 1984.
United States General Accounting Office. *New Directions for Federal Programs to Aid Mathematics and Science Teaching.* Washington, D.C.: General Accounting Office, 6 March 1984.
Whitaker, Joseph "Subtracting Math Teachers." *Washington Post,* 8 November 1981, p. Al.